

REMARKS

By the present amendment, claim 16 has been canceled.

Claims 1-15 remain pending in the application. Reconsideration and allowance of all of the claims is respectfully requested in view of the following remarks.

In regard to Rejection of Claims 1, 2, 4 and 7-9 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1, 2, 4 and 7-9 under 35 U.S.C. § 103(a), as being unpatentable over Fukumura '052, U.S. Patent No. 5,834,052. The Applicants disagree.

Referring to page 3 of the rejection, the Examiner states that Applicants' arguments filed on August 28, 2006 are not persuasive because

[e]ssentially applicant's position appears to suggest that the instant claim requires the "onto" structure to be met at the point where the materials exit the die. The examiner respectfully disagrees because the instant claim does not exclude the extruded sheets, layered upon each other, from being reoriented by a roller carrying a current collector. In other words, the broadest reasonable interpretation of the instant claim only requires that the extrudates exit the die through opening which are "adjacent" and that the overall extrusion process forms a final structure such that electrolyte sheet is extruded directly onto the electrode sheet.

The Applicants submit that the Examiner has failed to appreciate the Applicants' argument.

The Applicants did not argue that the "onto" structure is necessarily met at the point when the materials exit the die. The Applicants' argument was that the Fukumura references do not teach extruding an electrode slurry in the form of a thin sheet through a die opening. The Applicants did not, and do not presently, argue that the scope of the present claims depends on the "onto" structure being met at the point where the materials exit the die. The claims should not be construed to be so limited. The Applicants have restated their argument to clarify this point, and now rely explicitly on a feature of claim 1 that does not include the "onto" structure.

The Examiner's attention is directed to the following feature of claim 1:

(e) concurrently extruding said electrolyte slurry in the form of a thin electrolyte sheet through a second die opening [...]

The Applicants submit that at least the above feature of claim 1 is not taught by Fukumura '052.

Referring to lines 41-44 of column 3 of Fukumura '052, describing the embodiment shown in Figure 1 of Fukumura '052,

the coating solution for the electrode material discharged from the slot outlets are coated on the base material 2 in layers while forming a bead between the lips and the base material 2.

Referring to lines 6-10 of column 5 of Fukumura '052, describing the embodiment shown in Figure 2 of Fukumura '052,

the coating solutions for electrode material flowed down along the slide portion 18 in layers are coated on the base material 2 while forming a bead between the end portion of the slide portion and the base material 2.

Referring to lines 31-35 of column 5 of Fukumura '052, describing the embodiment shown in Figure 3 of Fukumura '052,

Coating solutions for electrode material are discharged from the slots 8 and 9 of the extrusion die and coated on a base material 2 continuously run while forming a bead between the end portion of the lips of the extrusion die portion and the base material 2.

Referring also to Figures 1, 2 and 3 of Fukumura '052, it is apparent that Fukumura '052 teaches extruding electrolyte materials in the form of a bead through a die opening, and subsequently forming the beads into thin layers on the base material 2. Therefore, Fukumura '052 does not teach extruding an electrolyte slurry in the form of a thin electrolyte sheet through a second die opening.

This deficiency in Fukumura '052 is not remedied by the Examiner's contention with respect to claims 1, 2 and 4 that

a person of ordinary skill in the art would have found it obvious to have used a lithium salt containing protective layer but without the active material, and would have been motivated to do so in order to use substantially similar materials that would adhere/bond well to one another

nor by the Examiner's contention with respect to claims 7-9 that

extruding onto to both sides of a preform/support that is passed through the extrusion die is well known in the extrusion art. At the time of invention a person of ordinary skill in the art would have found it obvious to have used a dies that extrudes onto to both sides of a collector/support wherein a preform/support is passed through the die, as commonly practiced in the art, in the process of Fukumura et al., and would have been motivated since Fukumura et al. suggests that coating both sides of the collector/foil is "typical".

The Applicants take no position at this time as to the correctness of the Examiner's contentions, and reserve the right to argue thereagainst in the future.

Therefore, at least one element of claim 1 is not taught by Fukumura '052 or the Examiner's contentions, without admitting the correctness of the Examiner's contentions. As such, the Examiner is requested to withdraw his rejection of claim 1 and claims 2, 4 and 7-9 depending therefrom.

In regard to Rejection of Claims 3, 5, 6, 10 and 11 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 3, 5, 6, 10 and 11 under 35 U.S.C. § 103(a), as being unpatentable over Fukumura '052 in view of Fukumura '556, U.S. Patent No. 5,674,556. The Applicants disagree.

The Examiner's attention is directed to the following feature of claim 1:

(e) concurrently extruding said electrolyte slurry in the form of a thin electrolyte sheet through a second die opening [...]

As discussed above with respect to claims 1, 2, 4 and 7-9, the above feature of claim 1 is not taught by Fukumura '052. The Applicants submit that this deficiency in Fukumura '052 is not remedied by Fukumura '556, without admitting that the two references can be combined and reserving the right to argue thereagainst in the future.

Referring to lines 22-24 of column 9 of Fukumura '556,

Further, 1 mol/liter of LiPF_6 (in a solution of 1:1 (v/v) mixture of ethylene carbonate and dimethyl carbonate), as an electrolytic solution, was injected into the cell can.

It is apparent that Fukumura '556 teaches using an electrolyte solution injected into a cell can, and makes no mention of extruding an electrolyte in the form of a thin electrolyte sheet. Therefore, Fukumura '556 does not teach extruding an electrolyte slurry in the form of a thin electrolyte sheet through a second die opening.

Therefore, at least one element of claim 1 is not taught by Fukumura '052 or Fukumura '556, alone or in combination, which combination is not admitted. As such, the Examiner is requested to withdraw his rejection of claims 3, 5, 6, 10 and 11 depending therefrom.

In regard to Rejection of Claims 12-15 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 12-15 under 35 U.S.C. § 103(a), as being unpatentable over Fukumura '052 in view of Applicant's admitted prior art. The Applicants disagree.

The Examiner's attention is directed to the following feature of claim 1:

(e) concurrently extruding said electrolyte slurry in the form of a thin electrolyte sheet through a second die opening [...]

As discussed above with respect to claims 1, 2, 4 and 7-9, the above feature of claim 1 is not taught by Fukumura '052. The Applicants submit that this deficiency in Fukumura '052 is not remedied by the Examiner's contention that

controlling layer thicknesses using various measuring devices (e.g. optical, ultra-sonic, etc.) is known to those skilled in the art and extruded to ensure strict tolerances (para. 28). At the time of invention a person of ordinary skill in the art would have found it obvious to have used any of the various measuring devices, as taught by applicant's admission, in the process of Fukumura et al., and would have been motivated to do so in order to achieve desired layer thicknesses within a specific thickness tolerance.

The Applicants take no position at this time as to whether the Examiner's contention represents subject matter that the Applicants have admitted to be prior art, and reserve the right to argue thereagainst in the future.

Therefore, at least one element of claim 1 is not taught by Fukumura '052 or the Examiner's contentions, without admitting the correctness of the Examiner's contentions. As such, the Examiner is requested to withdraw his rejection of claims 12-15 depending therefrom.

Miscellaneous Amendment

By the present amendment, claim 16 has been canceled. Claim 16 was previously withdrawn as being directed to a non-elected invention. The Applicants reserve the right to present claim 16 in a future division application.

In view of the above remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

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